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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,917	09/29/2003	Karl S. Johnson	MTIPAT.118C1C1	2090

20995 7590 12/28/2007

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EXAMINER	
CONTINO, PAUL F	

ART UNIT	PAPER NUMBER
2114	

NOTIFICATION DATE	DELIVERY MODE
12/28/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/675,917	JOHNSON ET AL.	
	Examiner	Art Unit	
	Paul Contino	2114	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *7-38 and 45-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *7-38 and 45-50* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION: Non-Final Rejection

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 7-9, 11-12, 15-19, 21, 23-25, 29, 31-38, 45-48, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martinez et al. (U.S. Patent No. 6,188,973) in view of Giorgio (U.S. Patent No. 5,905,867).

As in claim 7, Martinez et al. teaches of a computer monitoring and diagnostic system, comprising:

a computer, having a computing device and a housing *(Fig. 1)*;

wherein the computer includes a plurality of canisters, each of the canisters having a plurality of card slots *(Figs. 1-4; columns 4-7, where a shelf is a canister and the backplane contains card slots for I/O modules)*;

wherein the computer further comprises a plurality of canister controllers, wherein the canister controllers are configured to examine canister fan speeds associated with canister fans and to control power to the canisters *(Fig. 6; column 7 lines 13-14, where the fan signal 62 is*

displayed as a speed on GUI as "Blower (RPM)"; column 11 lines 28-39, where a shelf is powered down);

wherein the computer further comprises a plurality of temperature detectors and wherein the system is further configured to monitor temperatures indicated by the temperature detectors and compare the indicated temperatures to a desired operating temperature range and, when the indicated temperature exceeds an upper limit of the range, to automatically power down the system when the indicated temperature exceeds a warning threshold *(column 11 lines 28-39, where a temperature is monitored and compared to a set point threshold to determine whether or not to power down the system).*

However, Martinez fails to teach of adjusting a fan speed. Giorgio teaches that if the canister fan speed of at least one canister fan is below a threshold, the canister controller is configured to automatically increase the canister fan speed of the at least one canister fan without user input *(column 5 lines 16-35 and column 7 lines 2-4).*

It would have been obvious to a person skilled in the art at the time the invention was made to have included the fan speed control as taught by Giorgio in the invention of Martinez et al. This would have been obvious because adjusting the fan speed as taught by Giorgio in order to attempt to keep the computer system operating at a safe temperature.

As in claim 8, Martinez et al. teaches at least one of the canisters is removable from the computer *(column 6 lines 30-37).*

As in claim 9, Martinez et al. teaches of a microcontroller which is configured to log conditions about the canister to a recording system *(column 11 lines 15-17).*

As in claim 11, Martinez et al. teaches of a computer monitoring and diagnostic system, comprising:

a computer *(Fig. 1)*;

at least one sensor, located within the computer, configured to sense environmental conditions within the computer *(column 11 lines 28-39, where a temperature is monitored)*;

wherein the system compares the environmental conditions indicated by the at least one sensor to a threshold and to automatically power down the system when the environmental conditions exceed a warning threshold *(column 11 lines 28-39, where a temperature is monitored and compared to a set point threshold to determine whether or not to power down the system).*

However, Martinez et al. fails to teach of modification of an environmental condition by an actuator. Giorgio teaches of an actuator configured to modify an environmental condition of the computer without user input, the modification based at least in part on the environmental conditions sensed by the computer, and determines whether the actuator is capable of modification to a higher output level and automatically induces the actuator operate at the higher output level when the threshold is exceeded and the higher output level is available *(column 5 lines 16-35 and column 7 lines 2-4, where a fan is inherently controlled by an actuator to alter its speed in order to modify the operating temperature of the system).*

It would have been obvious to a person skilled in the art at the time the invention was made to have included the actuator control as taught by Giorgio in the invention of Martinez et al. This would have been obvious because adjusting the fan speed as taught by Giorgio in order to attempt to keep the computer system operating at a safe temperature.

As in claim 12, Martinez et al. teaches of a computer monitoring and diagnostic system, comprising:

a computer, the computer comprising a plurality of networked microprocessors *(Fig. 1)*;

at least one sensor, located within the computer, configured to sense conditions within the computer, the at least one sensor communicating with the plurality of networked microprocessors *(Figs. 1-6, columns 5-8)*; and

automatically powering down the system when the sensed condition exceeds a warning threshold *(column 11 lines 28-39, where a temperature is monitored and compared to a set point threshold to determine whether or not to power down the system)*.

However, Martinez fails to teach of modifying control components. Giorgio teaches of one or more variable control components in communication with the plurality of networked microprocessors, wherein at least one microprocessor of the plurality of the networked microprocessors is configured to modify the operation of the variable control components based at least in part on a comparison of the sensed condition to a desired range of operation; and wherein the modification is performed without user input when the sensed condition falls outside the desired range of operation *(column 5 lines 16-35 and column 7 lines 2-4, where a variable speed fan is controlled in order to alter its speed when a temperature threshold is sensed)*.

It would have been obvious to a person skilled in the art at the time the invention was made to have included the control modification as taught by Giorgio in the invention of Martinez et al. This would have been obvious because adjusting the fan speed as taught by Giorgio in order to attempt to keep the computer system operating at a safe temperature.

As in claim 15, Martinez et al. teaches of monitoring the speed of a canister fan *(Fig. 6; column 7 lines 11-16)*.

As in claim 16, Martinez et al. teaches of a computer monitoring and diagnostic system, comprising:

a computer, having a computing device, at least one cooling fan, and a housing *(Figs. 1-4)*;

at least one sensor, located within the computer, configured to sense temperature conditions within the computer *(column 11 lines 28-39, where a temperature is monitored)*; and

at least one microcontroller, located within the computer, wherein the microcontroller is configured to process requests for temperature conditions from the computer, responsively provide sensed temperature conditions to the computer, and, based at least in part on the sensed temperature conditions, to automatically power down the system when the sensed temperature conditions exceed a warning threshold *(Fig. 6; column 5 lines 12-22 and column 11 lines 28-39, where a temperature is monitored and compared to a set point threshold to determine whether or not to power down the system)*.

However, Martinez fails to teach of adjusting a fan speed. Giorgio teaches increasing fan speed without user input based at least in part on sensed temperature conditions *(column 5 lines 16-35 and column 7 lines 2-4)*.

It would have been obvious to a person skilled in the art at the time the invention was made to have included the fan speed control as taught by Giorgio in the invention of Martinez et al. This would have been obvious because adjusting the fan speed as taught by Giorgio in order to attempt to keep the computer system operating at a safe temperature.

As in claim 17, Martinez et al. teaches of a plurality of canisters and the microcontroller is configured to control power to the canisters *(Figs. 1-4; column 11 lines 32-39, where a cabinet is a canister)*.

As in claim 18, Martinez et al. teaches of the microcontroller is configured to control power to an individual slot of the canisters *(column 11 lines 32-39, shelf slot power control)*.

As in claim 19, Martinez et al. teaches the microcontroller is configured to log conditions to a recording system *(column 11 lines 15-17)*.

As in claim 21, Martinez et al. teaches the microcontroller is configured to control the system power to the computer *(column 11 lines 32-39)*.

As in claim 23, Martinez et al. teaches one of the microcontrollers in the microcontroller network is connected to a canister *(Figs. 1-4)*.

As in claim 24, Giorgio teaches of an actuator connected to the microcontroller, wherein the actuator is configured to modify an environmental condition of the computer *(column 7 line 53 through column 8 line 3)*.

As in claim 25, Martinez et al. teaches of a microcontroller for diagnosing and managing the conditions of a computer, the microcontroller network comprising:

one or more cooling fans arranged within the computer *(Fig. 4)*;

one or more temperature detectors *(Fig. 6; column 11 lines 32-34)*;

at least one microcontroller, located within the computer, wherein the microcontroller is in communication with the one or more cooling fans and temperature detectors and is configured to self-manage temperature conditions within the computer *(Fig. 4; column 7 lines 11-20 and column 11 lines 28-39)*;

wherein the microcontroller is further configured to automatically power down the computer when the sensed temperature conditions exceed a warning threshold *(column 11 lines 28-39, where a temperature is monitored and compared to a set point threshold to determine whether or not to power down the system)*.

However, Martinez fails to teach of adjusting a fan speed. Giorgio teaches to increase fan speed of cooling fans located within the computer without user input if a temperature warning is indicated *(column 5 lines 16-35 and column 7 lines 2-4)*.

It would have been obvious to a person skilled in the art at the time the invention was made to have included the fan speed control as taught by Giorgio in the invention of Martinez et al. This would have been obvious because adjusting the fan speed as taught by Giorgio in order to attempt to keep the computer system operating at a safe temperature.

As in claim 29, Martinez et al. teaches the microcontroller is configured to check for system faults *(column 7 lines 11-16)*.

As in claim 31, Martinez et al. teaches a selected one of the at least one microcontroller[s] is configured to monitor the speed of a canister fan *(Fig. 6; column 7 lines 11-16)*.

As in claim 32, Martinez et al. teaches of a computer monitoring and diagnostic system, comprising:

a computer, having a plurality of computer-related components, wherein the components have associated environmental and systemic conditions *(Figs. 1-4)*;

at least one sensor configured to sense the environmental and systemic conditions, wherein the sensor is located within the computer *(column 7 lines 11-20)*;

at least one environmental condition control component located within the computer *(column 11 lines 28-39)*; and

at least one microcontroller connected to the sensor, the environmental condition control component and the computer, wherein the microcontroller is configured to modify operation of the environmental condition control component without user input if the sensed environmental conditions of the computer indicate a warning and to automatically power down the computer when the sensed environmental conditions exceed a warning range of operation *(column 11 lines 28-39)*.

However, Martinez fails to teach of maintaining by a control component. Giorgio teaches the ability of the environmental condition control component to maintain the sensed environmental conditions within a warning range of operation *(column 5 lines 16-35 and column 7 lines 2-4)*.

It would have been obvious to a person skilled in the art at the time the invention was made to have included the fan speed control as taught by Giorgio in the invention of Martinez et al. This would have been obvious because adjusting the fan speed as taught by Giorgio in order to attempt to keep the computer system operating at a safe temperature.

As in claim 33, Martinez et al. teaches the microcontroller is located within the computer *(column 7 lines 11-16)*.

As in claim 34, Martinez et al. teaches the microcontroller is configured to process requests for environmental or systemic conditions from the computer and is configured to responsively provide the environmental or systemic conditions to the computer *(Fig. 6)*.

As in claim 35, Martinez et al. teaches the computer-related components comprise at least one component selected from the group consisting of: a system board, a central processing unit (CPU), a CPU fan, a backplane board, a backplane fan, a chassis, a chassis fan, a canister, a canister fan, a PCI card, and a PCI card fan *(Figs. 1-4; column 7 lines 11-16)*.

As in claim 36, Martinez et al. teaches the sensor is configured to detect the temperature levels of selected ones of the computer-related components *(Fig. 6; column 7 lines 11-16)*.

As in claim 37, Martinez et al. teaches the sensor is configured to detect the speed of a fan intended to cool down selected ones of the computer-related components *(Fig. 6; column 7 lines 11-16)*.

As in claim 38, Martinez et al. teaches the sensor is configured to detect the voltage level applied to selected ones of the computer-related components *(Fig. 6; column 7 lines 11-16)*.

As in claim 45, Martinez et al. teaches a computer monitoring and diagnostic system, comprising:

a computer, having a computing device and a housing *(Figs. 1-4)*;

at least one temperature sensor, located within the computer, configured to sense temperature conditions within the computer *(column 7 lines 11-20)*;

at least one cooling group arranged within the housing *(Fig. 4 #56)*; and

at least one microcontroller, located within the computer, connected to the temperature sensor and the computer, wherein the microcontroller is configured to process requests for temperature conditions from the computer, responsively provide sensed conditions to the computer, and self-manage conditions of the computer, wherein the modification is based at least in part on the sensed condition and wherein the microcontroller is configured to induce power down of the computer when the temperature conditions exceed a warning threshold *(column 11 lines 28-39)*.

However, Martinez fails to teach of modifying the operations of the cooling group without user input. Giorgio teaches modifying the operations of the cooling group without user input based at least in part on the sensed condition *(column 5 lines 16-35 and column 7 lines 2-4)*.

It would have been obvious to a person skilled in the art at the time the invention was made to have included the fan speed control as taught by Giorgio in the invention of Martinez et

al. This would have been obvious because adjusting the fan speed as taught by Giorgio in order to attempt to keep the computer system operating at a safe temperature.

As in claim 46, Martinez et al. teaches of a plurality of canisters and the microcontroller is configured to control power to the canisters *(Figs. 1-4; column 11 lines 32-39, where a cabinet is a canister)*.

As in claim 47, Martinez et al. teaches of the microcontroller is configured to control power to a slot *(column 11 lines 32-39, shelf slot power control)*.

As in claim 48, Martinez et al. teaches the microcontroller is configured to log conditions to a recording system *(column 11 lines 15-17)*.

As in claim 50, Martinez et al. teaches the microcontroller is configured to control the system power to the computer *(column 11 lines 32-39)*.

* * *

2. Claims 10, 14, 20, 30, and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martinez et al. in view of Giorgio, further in view of Treu (U.S. Patent No. 5,245,615).

As in claims 10, 14, 20, 30, and 49, the combined invention of Martinez et al. and Giorgio teaches of logging messages. However, the combined invention of Martinez et al. and

Giorgio fails to teach of logging messages in non-volatile random access memory. Treu teaches of logging messages in a non-volatile random access memory *(column 2 lines 11-13)*.

It would have been obvious to a person skilled in the art at the time the invention was made to have included the NV-RAM as taught by Teru in the combined invention of Martinez et al. and Giorgio. This would have been obvious because use of a non-volatile random access memory allows for logged data to be stored and accessed efficiently without loss of memory if a system is powered down.

* * *

3. Claims 13, 26, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martinez et al. in view of Giorgio, further in view of Lui et al. (U.S. Patent No. 5,337,413).

As in claims 13 and 26, 27, and 28, the combined invention of Martinez et al. and Giorgio teaches the limitations of claim 12 and 25, respectively. However, the combined invention of Martinez et al. and Giorgio fails to teach of checking for a bus time-out, manual system board reset, or software reset command. Lui et al. teaches of checking for a microcontroller bus time-out *(column 6 lines 19-22)*, a manual system board reset *(column 5 lines 1-14)*, and a software reset command *(column 5 lines 1-14)*.

It would have been obvious to a person skilled in the art at the time the invention was made to have included the bus time-out check as taught by Lui et al. in the combined invention of Martinez et al. and Giorgio. This would have been obvious because Lui teaches of an enhanced health monitoring system *(column 3 lines 30-38)*.

* * *

4. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Martinez et al. in view of Giorgio, further in view of Ghislain Gabriel Vecoven et al. (U.S. PGPub 2004/0210800).

As in claim 22, the combined invention of Martinez et al. and Giorgio teaches the limitations of claim 16. However, the combined invention of Martinez et al. and Giorgio fails to teach of an I2C bus. Ghislain Gabriel Vecoven et al. teaches of an I2C bus *(paragraph [0083])*.

It would have been obvious to a person skilled in the art at the time the invention was made to have included the I2C bus as taught by Ghislain Gabriel Vecoven et al. in the combined invention of Martinez et al. and Giorgio. This would have been obvious because Ghislain Gabriel Vecoven et al. teaches of enhanced fault management in a computer system (paragraph [0003]).

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Contino whose telephone number is (571) 272-3657. The examiner can normally be reached on Monday-Friday 9:00 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on (571) 272-3644. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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12/21/2007

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